

~~PRELIMINARY ISSUE~~ 10.10.09

Work Order ID 61927-2



Thursday, September 09, 2010 12:55:03 PM

Item ID: D4180-2

Accept



Setup Start



Revision ID: PRELIM

split

Item Name: Gusset

Stop



Start Date: 9/9/2010

Start Qty: 2.00



Cust Item ID:

Required Date: 9/16/2010

Req'd Qty: 2.00



Customer:

Reference:

Approvals:

Process Plan:

H

Date: 10-9-09

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4180

PA1

100

0.00



Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: PA1

Prog Rev: PA1

2-Deburr if necessary

HB 10-9-13

(4)

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

HB 10-9-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 61927

Thursday, September 09, 2010 12:55:03 PM



Page 2

Item ID: D4180-2

Revision ID: PRELIM

Item Name: Gusset

Start Date: 9/9/2010 Start Qty: 2.00

Required Date: 9/16/2010 Req'd Qty: 2.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

QC:

Date:

Tooling:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/  
Work Center ID

120



QC

Quality Control

Operation  
Description

QC8- Inspect parts - second check

Memo

Set Up/  
Run Hours

0.00 - inspected to PA1

0.00

Day only (x4)  
8/10/13

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130



Brake NC

Brake NC

Bend as per dwg

Memo

0.00

0.00

Sh 10/29/14

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00 - inspected to PA1

0.00

Day only  
8/10/14 (x4)  
-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Work Order ID 61927

Thursday, September 09, 2010 12:55:03 PM



Page 3

Item ID: D4180-2

Accept

Revision ID: PRELIM

Item Name: Gusset

Start Date: 9/9/2010 Start Qty: 2.00

Required Date: 9/16/2010 Req'd Qty: 2.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan:

QC:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start

Stop

Sequence ID/  
Work Center ID

150



HandFinish

Hand Finishing

Operation  
Description

Chemical Conversion Coat per QSI005 4.1

Memo

Set Up/  
Run Hours

0.00

0.00

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160



QC

Quality Control

QC3- Inspect Part Finish

Memo

0.00

0.00

170



Packaging

Packaging

Identify as per dwg & Stock Location:

Memo

0.00

0.00

*Composites*  
*CA*

*Ian*

*(4) 0*

*BT 10-10-01 (83)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 61927

Thursday, September 09, 2010 12:55:03 PM



Page 4

Item ID: D4180-2

Revision ID: PRELIM

Item Name: Gusset

Start Date: 9/9/2010 Start Qty: 2.00

Required Date: 9/16/2010 Req'd Qty: 2.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

180



QC

Quality Control

Operation  
Description

QC21 - Final Inspection - Work Order Release

Memo

Set Up/  
Run Hours

0.00

0.00

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

10/10/01

PS 10-10-01

(3)

POSITIVE RECALL

EFFECTIVE 10.01.01 AUTH       

RELEASED        DATE 10.10.01

PER RELEASED DWS  
DATED 10.09.29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, September 09, 2010 12:55:07 PM

Page 1

Work Order ID: 61927

Parent Item: D4180-2

Parent Item Name: Gusset




Start Date: 9/9/2010

Required Date: 9/16/2010

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 10.09.09 new issue DD ver:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.125  6061-T6 .125 Sheet		Purchased	No			100	sf	125.2600	0.191	0.402105			



B10-9-B

Location

Loc Qty

Loc Code

MAT21

125.26

113608

96

114352

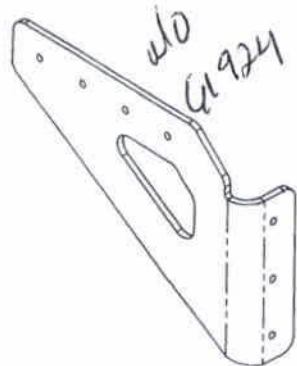
29.26

114352

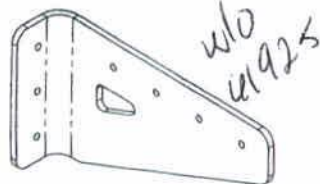
(4)

Rowe / Born / AxF  
 → **ADWE**

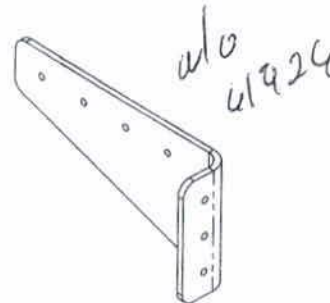
x 2 ends



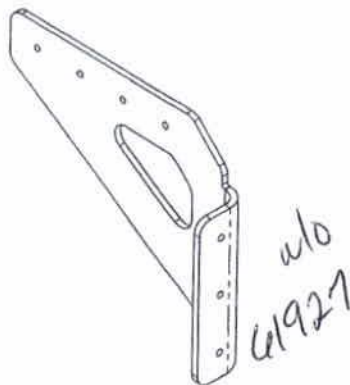
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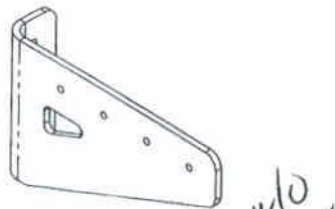
**D4180-3 GUSSET**



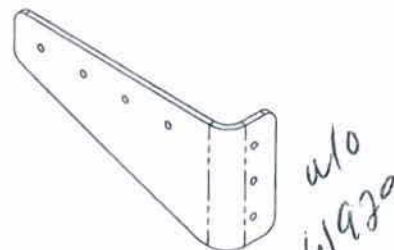
**D4180-5 GUSSET**



**D4180-2 GUSSET**



**D4180-4 GUSSET**

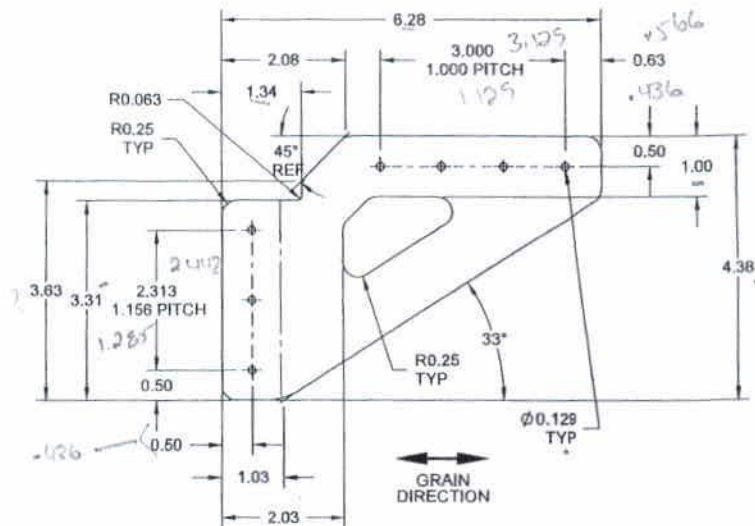
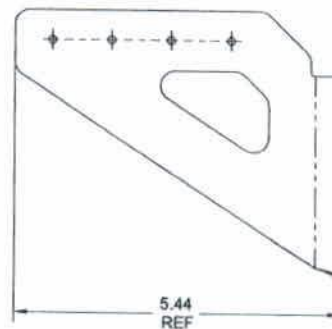
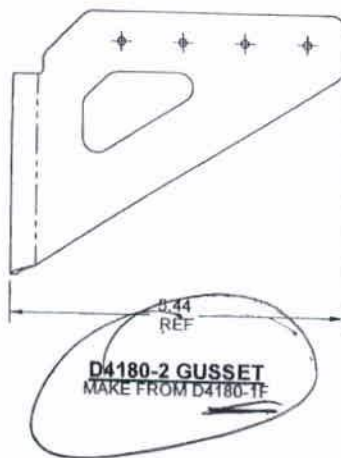
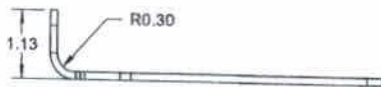


**D4180-6 GUSSET**

RECEIVED  
 10.09.08  
 41927  
 BP 10-9-09

**PRELIMINARY ISSUE**  
 10.09.08

PA1	NEW ISSUE	DESCRIPTION	MB	10.09.03
REV.			BY	DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		
DRAWN				
CHECKED		DRAWING NO.	REV. PA1	
MFG. APPR.		D4180		SHEET 1 OF 4
APPROVED		TITLE	SCALE	
DE APPR.		POD FRAME GUSSETS	NTS	
DATE	10.09.03	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

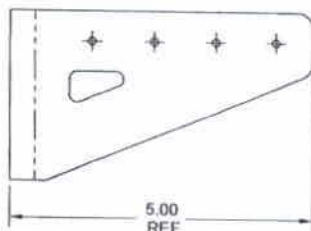
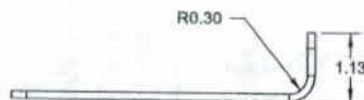
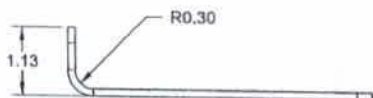


**PRELIMINARY ISSUE**  
10.09.08

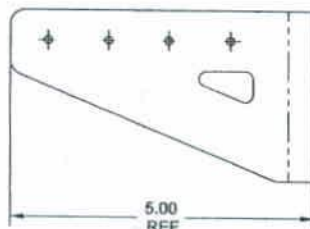
**NOTES:**

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.19 lbs EACH

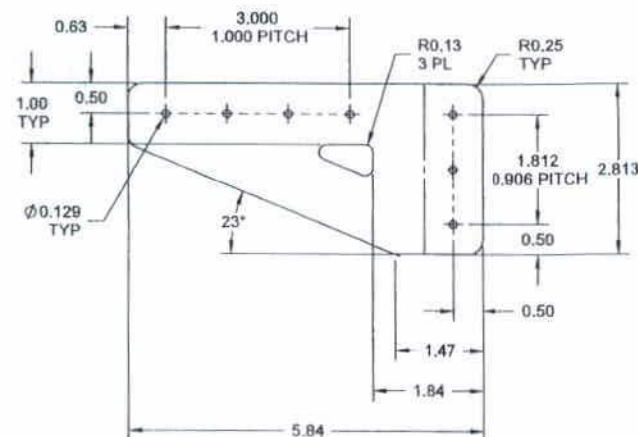
DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		<b>D4180</b>	SHEET 2 OF 4
APPROVED		TITLE	SCALE
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**D4180-4 GUSSET**  
MAKE FROM D4180-3F



**D4180-3 GUSSET**  
MAKE FROM D4180-3F



**D4180-3F GUSSET FLAT PATTERN**

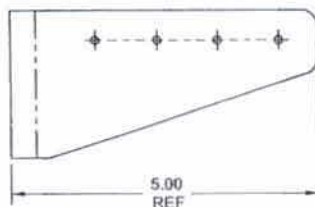
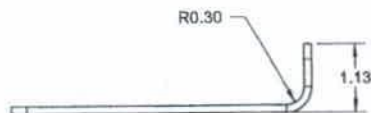
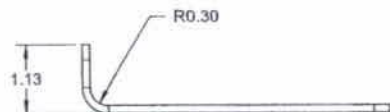
*W/O 41927*

**PRELIMINARY ISSUE**  
10.09.08

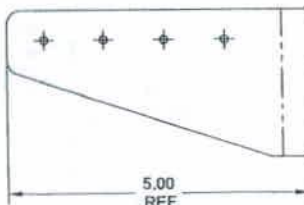
**NOTES:**

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.15 lbs EACH

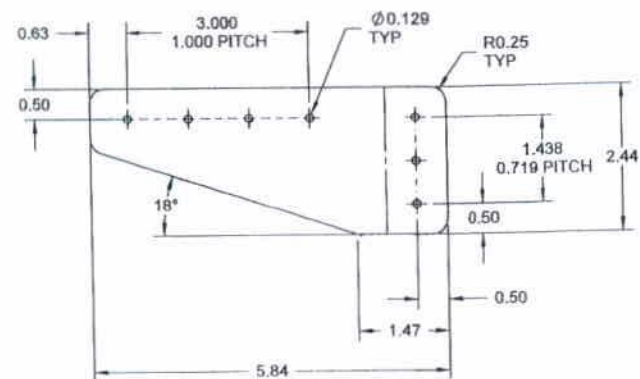
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN		DRAWING NO. <b>D4180</b>	REV. PA1
CHECKED			SHEET 3 OF 4
MFG. APPR.		TITLE <b>POD FRAME GUSSETS</b>	SCALE NTS
APPROVED		COPYRIGHT © 2008 BY DART AEROSPACE LTD	
DE APPR.		THIS DOCUMENT IS PRELIMINARY AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	10.09.03		



**D4180-5 GUSSET**  
MAKE FROM D4180-5F



**D4180-6 GUSSET**  
MAKE FROM D4180-5F



**D4180-5F GUSSET FLAT PATTERN**

*u10 u1927*

**PRELIMINARY ISSUE**  
10.09.08

**NOTES:**

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF. DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.13 lbs

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA
MFG. APPR.		D4180	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		POD FRAME GUSSETS	NTS
DATE	10.09.03	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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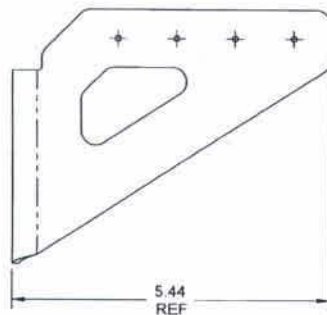
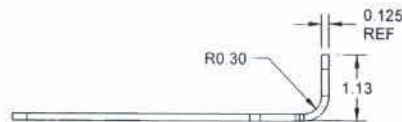
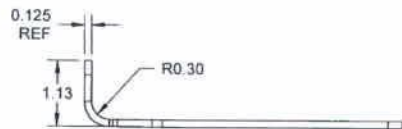
DART AEROSPACE LTD		Work Order: 61924
Description: GUSSET		Part Number: D4180-1
Inspection Dwg: D4180-1 Rev: 9A1		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

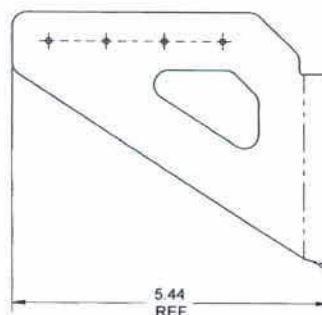
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .129	+ .005 - .001	.129	✓		V HB2	
1.34	± .030	1.337	✓		V	
2.08	± .030	2.08	✓		V	
3.000	± .010	3.000	✓		V	
1.000	± .010	1.000	✓		V	
.63	± .030	.630	✓		V	
6.76	± .030	6.299	✗		V	
.50	± .030	.501	✓		V	
1.00	± .030	1.000	✓		V	
4.38	± .030	4.383	✓		V	
2.03	± .030	2.038	✓		V	
1.03	± .030	1.025	✗		V	
.50	± .030	.497	✗		V	
2.313	± .010	2.315	✗		V	
1.156	± .010	1.159	✗		V	
3.31	± .030	3.316	✓		V	
3.63	± .030	3.633	✓		V	
.125	± .010	.123	✗		V	

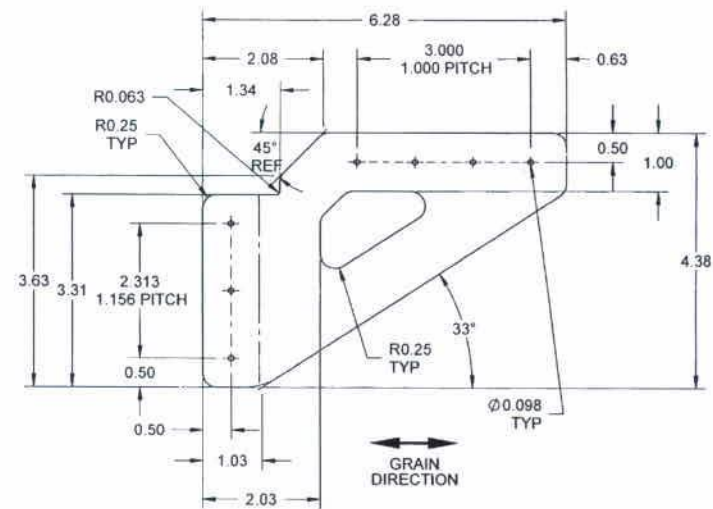
Measured by: IB	Audited by: S	Prototype Approval: N/A
Date: 10-9-13	Date: 10/09/13	Date: N/A
inspected 10 Part Dwg only		
Rev A	Date	Change
		New Issue
	Revised by	Approved
	KJ/JLM	



**D4180-2 GUSSET**  
MAKE FROM D4180-1F



**D4180-1 GUSSET**  
MAKE FROM D4180-1F



**D4180-1F GUSSET FLAT PATTERN**

61927

**RELEASED**  
2010-09-29

**NOTES:**

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF: DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.19 lbs EACH

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		<b>D4180</b>	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		<b>POD FRAME GUSSETS</b>	NTS
DATE	10.09.03	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	